

Exhibit A

Exhibit A1: Joint Claim Construction Chart for U.S. Patent No. 6,233,389 to Barton, et al.

Exhibit A2: Joint Claim Construction Chart for U.S. Patent No. 6,792,195 to Barton, et al.

Exhibit A3: Joint Claim Construction Chart for U.S. Patent No. 7,493,015 to Van Stam, et al.

Exhibit A1

Joint Claim Construction Chart for U.S. Patent No. 6,233,389 to Barton, et al.
TiVo Inc. v. Cisco Systems, Inc., Time Warner Cable Inc., and Time Warner Cable LLC
 (Case No. 2:12-CV-311-JRG and consolidated Case No. 2:12-CV-434-JRG)

Claims	Term, Phrase, or Clause	TiVo's Proposed Construction	Cisco and TWC's Proposed Construction
1, 31, 32, 61	parses	“analyzes”	“detects the beginning of all important events in a video or audio stream, the start of all the frames, and the start of sequence headers”
31, 61	physical data source... parses video and audio data from said broadcast data and temporarily stores said video and audio data	Plain meaning	“physical data source parses the video and audio data from the broadcast data and stores the video and audio data in separate buffers”
31, 61	object	“a collection of data and operations”	“a functionally interrelated set of data and operations” The same construction of “object” applies to the terms “source object,” “transform object,” “sink object,” and “control object.”
31, 61	source object	“a collection of data and operations that (1) extracts video and audio data from a physical data source, (2) obtains a buffer from a transform object, (3) converts video data into data streams, and (4) fills the buffer with the streams”	“an object that (1) extracts video and audio data from a physical data source, (2) obtains a buffer from a transform object, (3) converts video data into data streams, and (4) fills the buffer with the streams”

Claims	Term, Phrase, or Clause	TiVo's Proposed Construction	Cisco and TWC's Proposed Construction
31, 61	wherein said source object extracts video and audio data from said physical data source	"wherein said source object obtains video and audio data from said physical data source"	"wherein said source object takes out video and audio data from said physical data source"
31, 61	transform object	"a collection of data and operations that transforms the form of data upon which it operates"	"an object that is responsible for intelligently allocating and queuing the shared buffers of data on which it will operate"
31, 61	sink object	"a collection of data and operations that (1) obtains data stream buffers from a transform object and (2) outputs the streams to a video and audio decoder"	"an object that (1) obtains data stream buffers from a transform object and (2) outputs the streams to a video and audio decoder"
31, 61	control object	"a collection of data and operations that receives commands from a user that control the flow of broadcast data"	"an object that receives commands from a user that control the flow of broadcast data"
31, 61	automatically flow controlled	"self-regulated"	"the flow of data is self-regulated by allocating and queuing buffers shared between the source and sink objects"
31, 61	wherein said source object is automatically flow controlled by said transform object	Plain meaning	"wherein the transform object allocates and queues buffers to the source object from the sink object"
31, 61	wherein said sink object is automatically flow controlled by said transform object	Plain meaning	"wherein the transform object allocates and queues buffers to the sink object from the source object"

Claims	Term, Phrase, or Clause	TiVo's Proposed Construction	Cisco and TWC's Proposed Construction
1, 32	providing at least one Input Section, said Input Section converts said specific program to an Moving Pictures Experts Group (MPEG) formatted stream for internal transfer and manipulation	“providing at least one portion of a device that receives inputs, wherein said portion of the device that receives inputs converts said specified frequency range to an Moving Picture Experts Group (MPEG) formatted stream for internal transfer and manipulation”	“the input section converts the specific program to an MPEG stream suitable for internal transfer and manipulation”
1, 32	media switch	“hardware and/or code that mediates between a microprocessor CPU, hard-disk or storage device, and memory”	“a hardware and/or code switch that mediates between a microprocessor CPU, hard-disk or storage device, and memory”
1, 32	said MPEG stream is separated into its video and audio components	“the audio and video components are in separate buffers, not merely logically separated by way of indexing”	“the video and audio components of the MPEG stream are copied into separate buffers, not merely logically separated by way of indexing”
1, 32	assembles said video and audio components into an MPEG stream	“interleaved assembly of the audio and video components into an MPEG stream”	“reassembles said video and audio components into a single interleaved MPEG stream”

Exhibit A2

Joint Claim Construction Chart for U.S. Patent No. 6,792,195 to Barton, et al.
TiVo Inc. v. Cisco Systems, Inc., Time Warner Cable Inc., and Time Warner Cable LLC
 (Case No. 2:12-CV-311-JRG and consolidated Case No. 2:12-CV-434-JRG)

Claims	Term, Phrase, or Clause	TiVo's Proposed Construction¹	Cisco and TWC's Proposed Construction
58	discards	Plain meaning	"delete"
58	cache access means for selecting a portion of the linear cache for streaming access to information stored therein	<p>Function: To select a portion of the linear cache to access information stored in the linear cache</p> <p>Corresponding Structure: A playback pointer (current block indicator) that selects a portion of information stored in the linear cache that can be retrieved from the linear cache</p>	<p>Function: selecting a portion of the linear cache for streaming access to information stored therein</p> <p>Corresponding Structure: buffer controller (201) and a current block indicator, and equivalents thereof</p>

¹ With respect to U.S. Patent No. 6,792,195, TiVo believes the constructions proposed in its May 22, 2013 P.R. 4-2 disclosures for these terms are proper and should be adopted by the Court. If, however, the Court decides to follow its approach from *Motorola Mobility, Inc., et al. v. TiVo Inc.* (5:11-cv-053-JRG) (Docket No. 222), as to which TiVo reserves all of its rights, TiVo believes the Court should, at a minimum, modify the constructions for certain terms as reflected by TiVo's "Alternative" constructions in Exhibit A2.

Claims	Term, Phrase, or Clause	TiVo's Proposed Construction¹	Cisco and TWC's Proposed Construction
58	cache control means for controlling a rate of said streaming access to said linear cache wherein said cache control means controls a rate and direction of said streaming access	Function: Controlling a rate and direction of streaming access to the linear cache Corresponding Structure: A buffer controller that provides an instruction to retrieve information from the linear cache for presentation at a certain rate and direction, such as fast forward and reverse	Function: Controlling a rate and direction of streaming access to the linear cache Corresponding Structure: buffer controller (201), stream clock (202), and a rate multiplier, and equivalents thereof Function: Controlling a rate and direction of streaming access to the linear cache Corresponding Structure: buffer controller (201), stream clock (202), and a rate multiplier, and equivalents thereof

Claims	Term, Phrase, or Clause	TiVo's Proposed Construction ¹	Cisco and TWC's Proposed Construction
58	synchronization means for synchronizing streamed information from said linear cache for delivery to said cache access means	<p>Function: Synchronizing streamed information from the linear cache for delivery to the cache access means.</p> <p>Corresponding Structure: A buffer controller that receives streaming information from the linear cache and provides an instruction(s) to move the position of the playback pointer.</p> <p><u>Alternative</u></p> <p>Function: synchronizing streamed information from the linear cache for delivery to the cache access means</p> <p>Corresponding Structure: stream clock (202) and buffer controller (201) programmed to execute the necessary steps of the synchronization algorithm described at 7:32-55, and equivalents thereof</p>	<p>Function: synchronizing streamed information from the linear cache for delivery to the cache access means</p> <p>Corresponding Structure: stream clock (202) and buffer controller (201) programmed to execute the synchronization algorithm described at 7:32-67, and equivalents thereof</p>

Claims	Term, Phrase, or Clause	TiVo's Proposed Construction¹	Cisco and TWC's Proposed Construction
60	stream capture means for capturing information for a particular data stream type and encoding said information before storing said information in said linear cache	<p>Function: Capturing and encoding information for a particular type of data before storing the information in the linear cache.</p> <p>Corresponding Structure: A capture mechanism that adds an attribute to blocks of data that are stored in the linear cache.</p> <p><u>Alternative</u></p> <p>Function: capturing information for a particular data stream type and encoding it before storing it in the linear cache</p> <p>Corresponding Structure: the necessary components of the capture mechanism as described in column 7, lines 4 through 5 and 16 through 26, and equivalents thereof.</p>	<p>Function: capturing information for a particular data stream type and encoding it before storing it in the linear cache</p> <p>Corresponding Structure: capture mechanism as described in 7:4-26, and equivalents thereof</p>

Claims	Term, Phrase, or Clause	TiVo's Proposed Construction¹	Cisco and TWC's Proposed Construction
64	presentation means for presenting the streaming access from said cache access means to a storage device	<p>Function: Presenting streaming access from the cache access means to a storage device.</p> <p>Corresponding Structure: A buffer controller that specifies a presentation time stamp to a storage device of the linear cache that is used to access information in the storage device.</p> <p><u>Alternative</u></p> <p>Function: presenting the streaming access from the cache access means to a storage device</p> <p>Corresponding Structure: clip capture device (203) with the necessary components of the clip capture module described in column 10, lines 6 through 27, and equivalents thereof</p>	<p>Function: presenting the streaming access from the cache access means to a storage device</p> <p>Corresponding Structure: clip capture device (203) with the clip capture module described in 10:6-35, and equivalents thereof</p>

Exhibit A3

Joint Claim Construction Chart for U.S. Patent No. 7,493,015 to Van Stam, et al.
TiVo Inc. v. Cisco Systems, Inc., Time Warner Cable Inc., and Time Warner Cable LLC
(Case No. 2:12-CV-311-JRG and consolidated Case No. 2:12-CV-434-JRG)

Claims	Term, Phrase, or Clause	TiVo's Proposed Construction	Cisco/TWC's Proposed Construction
1, 13, 17	to compensate for a difference between the current position and the user's expected termination point in the program material	"calculating a new position in the program material to make up for a difference between the current position and the user's expected termination point in the program material"	"The user's expected termination point" is indefinite, unless construed as: "calculating a new position in the program material to make up for a difference between the current position and the position in the program material where the user expects to be when that user stops the fast forward or reverse modes, as calculated based on the prior actions of the specific user and not as a fixed offset greater than half a second"